the edge switch in response to first dynamic cost information packet, and wherein the first acknowledgement packet will have a set broadcast learn flag to inform the edge switch that broadcast packets will be transmitted from a particular port of the edge switch, where the particular port has received the first acknowledgement packet with the set broadcast learn flag; and

forwarding received broadcast messages to other network devices in accordance with said pruned broadcast tree.

11. (Three Times Amended) A network switch including a computer readable storage medium tangibly embodying a method operable within said network switch for managing a broadcast tree, said method comprising the steps of:

constructing a pruned broadcast tree by propagation of dynamic cost information packets from edge switches, wherein a dynamic cost information packet is sent by an edge switch and a receiving switch sends back a first acknowledgement packet to the edge switch in response to first dynamic cost information packet, and wherein the first acknowledgement packet will have a set broadcast learn flag to inform the edge switch that broadcast packets will be transmitted from a particular port of the edge switch, where the particular port has received the first acknowledgement packet with the set broadcast learn flag; and

forwarding received broadcast messages to other network devices in accordance with said pruned broadcast tree.

Please cancel claims 21, 22, 24, and 25.

Please add the following claims:

27. (New) The method of claim 1, wherein the first acknowledgment packet is used to establish a broadcast path from the edge switch to the receiving switch.

28. (New) The method of claim 1, wherein the edge switch can receive a second acknowledgment packet subsequently to receiving the first acknowledgment packet, and wherein the second acknowledgement packet will not include a set broadcast learn flag.

29. (New) The method of claim 1, further comprising:

in response to a link failure, constructing a new pruned broadcast tree, including receiving a new dynamic cost information packet, removing all broadcast paths to other switches, and sending a new acknowledgement packet in response to the new dynamic cost information packet in order to establish a new broadcast path.

30. (New) The method of claim 11, wherein the first acknowledgment packet is used to establish a broadcast path from the edge switch to the receiving switch.